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FIG. 1

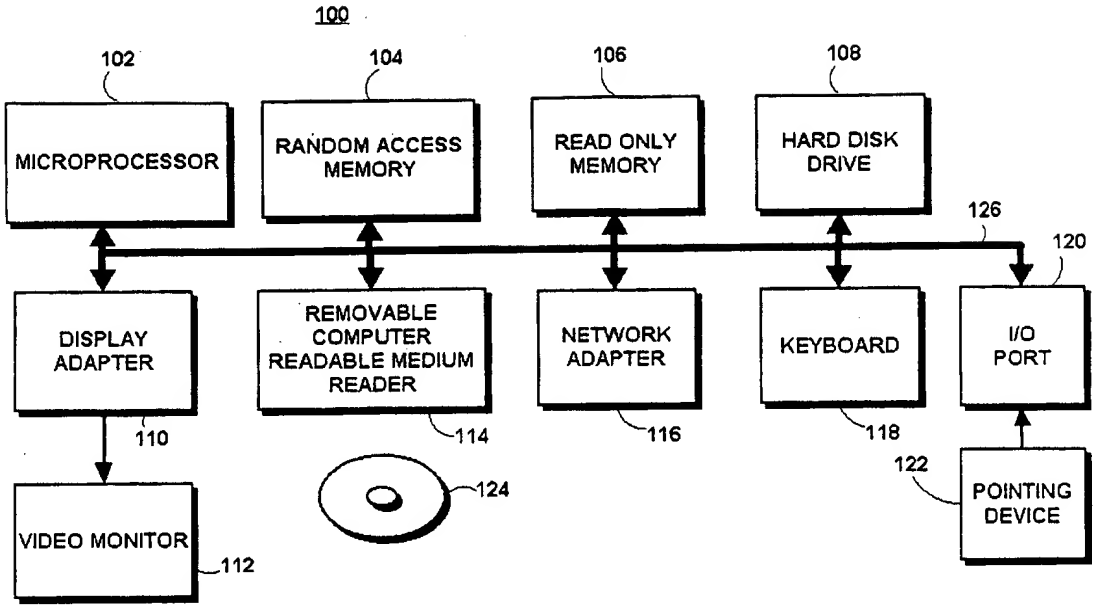

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FIG. 2

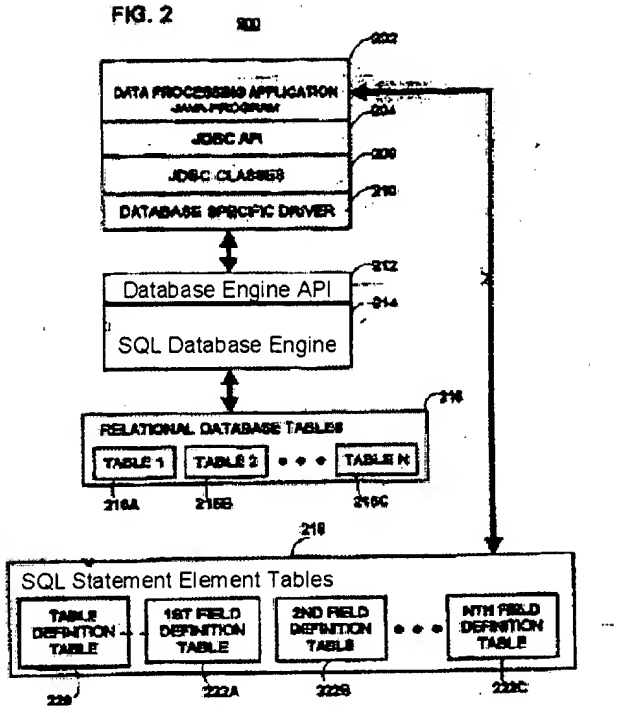

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FIG. 3

Example Table Definition Table

300 Expands 220

302	304	306	308	310	312
Target Tablename UTABLENAME ITABLENAME	Query Tablename QTABLENAME	Query Search Clause QSEARCH	Target Action ACTION	Fielddef TableName FTABLENAME	Table Seq # TABSEQ
OperStat	TempStat		insert	OperStatTab	1
UnitStat	OperStat		update/insert	UnitStatTab	2
Complex3tat	UnitStat	ComplexID=1	update	ComplexTab	3
ComplexStat	UnitStat	ComplexID=2	update	ComplexTab	3

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Example Field Definition Tables.

FIG. 4

Field Definition Table: OperStat

400 expands 222A

402 Target Field Name TFIELD	404 Query Select Clause SCLAUSE	406 Query Groupby Clause GCLAUSE	408 Update Set Clause UCLAUSE	410 Update Where Clause WCLAUSE	412 Insert Field Clause ICLAUSE	414 Field Java Type JTYPE	416 Select Field Seq # SFLD SEQ	418 Target Field Seq # TFLDSEQ
Complex	Complex				Complex	String	1	1
Unit	Unit				Unit	String	2	2
Oper	Oper				Oper	String	3	3
Shifts	Shifts				Shift	int	4	4
Calls	Oper				Calls	int	5	5
WrkTime	WrkTime				WrkTime	int	6	6

Field Definition Table: UnitStatTab

420 expands 222B

422 Target Field Name TFIELD	424 Query Select Clause SCLAUSE	426 Query Groupby Clause GCLAUSE	428 Update Set Clause UCLAUSE	430 Update Where Clause WCLAUSE	432 Insert Field Clause ICLAUSE	434 Field Java Type JTYPE	436 Select Field Seq # SFLD SEQ	438 Target Field Seq # TFLDSEQ
Complex	Complex	Complex		Complex=?	Complex	String	1	1
Unit	Unit	Unit		Unit=?	Unit	String	2	2
Calls	SUM(Calls)		Calls=?		Calls	int	3	3
WrkTime	SUM(WrkTime)		WrkTime=?		WrkTime	int	4	4
CumCalls			CumCalls= CumCalls+?		CumCalls	int	5	5
CumWrkTime			CumWrkTime= CumWrkTime+?		CumWrkTime	int	4	6

Field Definition Table: ComplexStatTab

440 expands 222C

442 Target Field Name TFIELD	444 Query Select Clause SCLAUSE	446 Query Groupby Clause GCLAUSE	448 Update Set Clause UCLAUSE	450 Update Where Clause WCLAUSE	452 Insert Field Clause ICLAUSE	454 Field Java Type JTYPE	456 Select Field Seq # SFLD SEQ	458 Target Field Seq # TFLDSEQ
Complex	Complex			Complex = ?		String	1	1
Calls	SUM(Calls)		Calls=Calls + ?			int	2	2
HrsWork	Sum(WrkTime)		HrsWork=HrsWork+?			int	3	3

PRINT OF DRAWINGS
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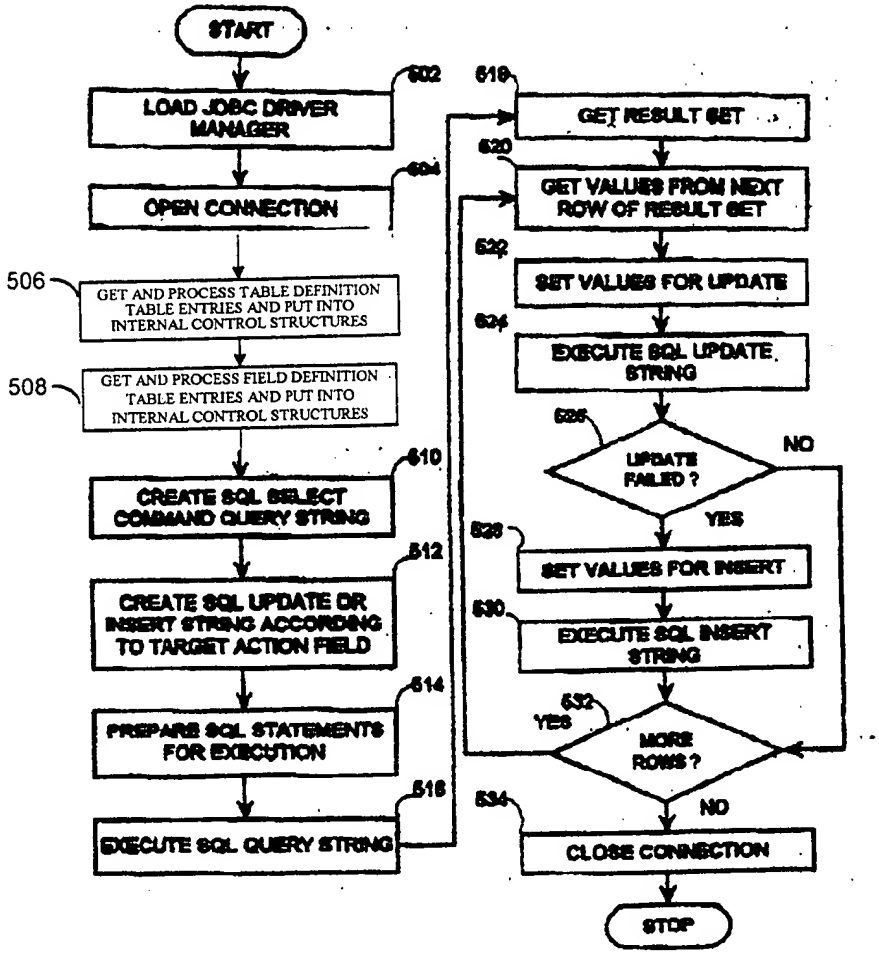
FIG. 5



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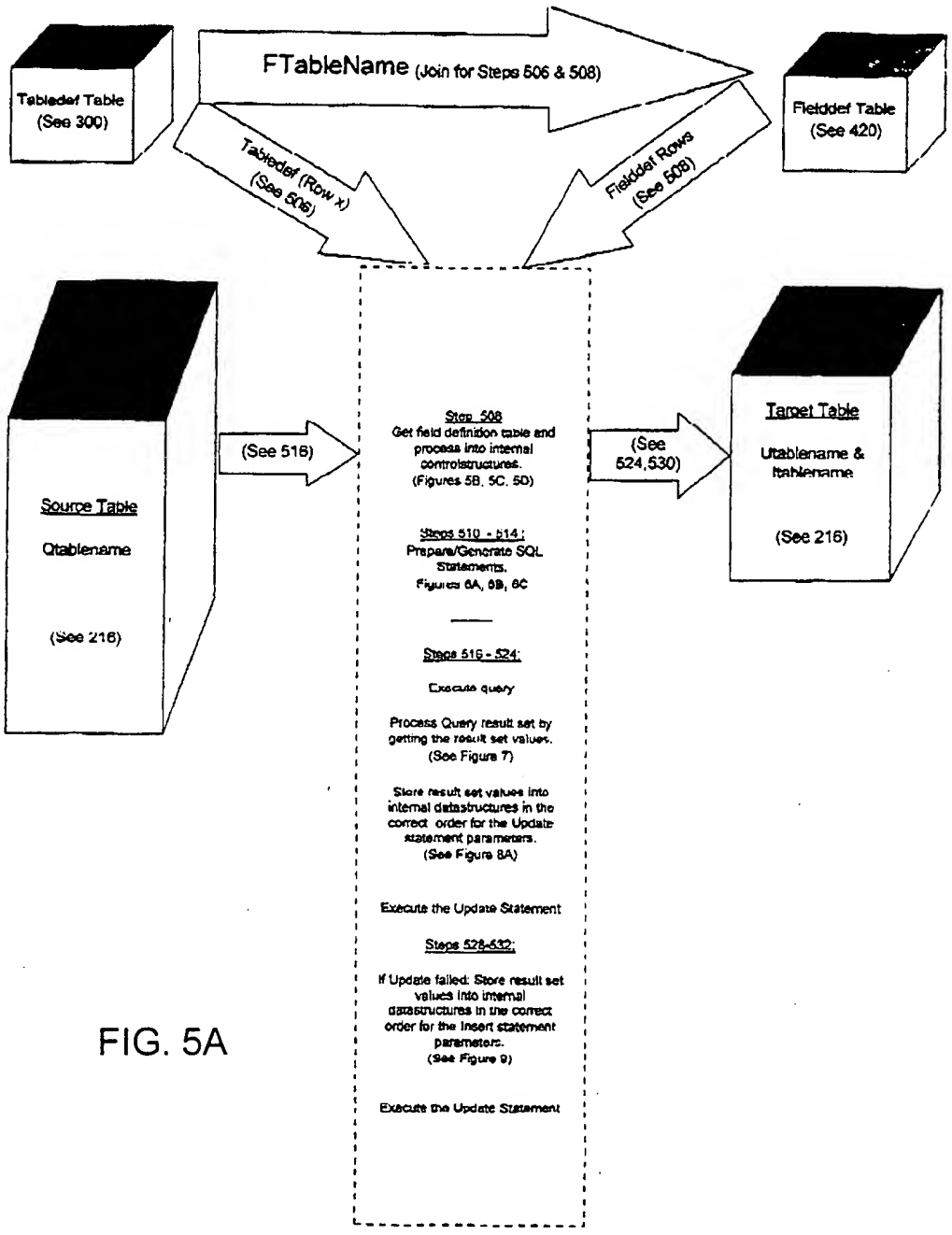

FIG. 5A

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550

```
Select SCLAUSE, JTYPE, SFLDSEQ FROM UnitStatTab WHERE SCLAUSE is NOT NULL ORDER BY SFLDSEQ

i = 1
While not end of resultset
{
// Get values from next row of resultset
SClause[i] = GetString [1]        // get SCLAUSE
SJType[i] = GetString [2]         // get JTYPE
SFldSeq[i] = GetInt [3]           // get SFldSeq
i++
}
Save = i-1;
```

551

FIG. 5B1

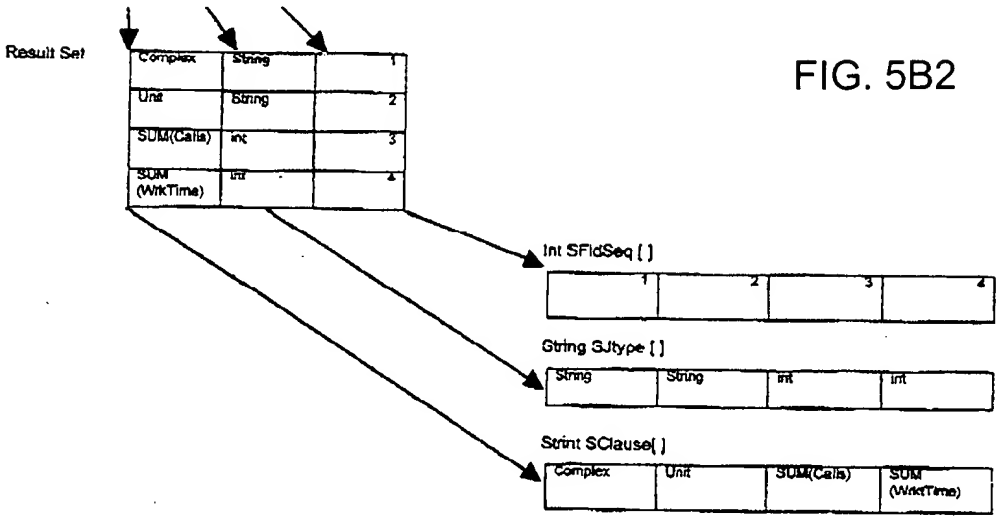

FIG. 5B2

PRINT OF DRAWINGS
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FIG. 5B3

556

```
SELECT GCLAUSE,SFLDSEQ FROM UnitStatTab WHERE GCLAUSE is NOT NULL ORDER BY SFLDSEQ
```

557

```
i = 1
While not end of resultset
{
// Get values from next row of resultset
GClause[i] = GetString [i]          // get GCLAUSE
i++
}
Gsize=i-
```

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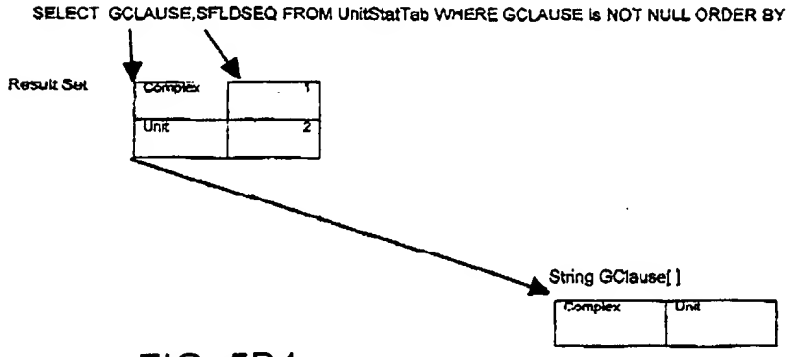

FIG. 5B4

PRINT OF DRAWINGS
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FIG. 5C1

565

```
Select UCLAUSE, JTYPE, SFLDSEQ,TFLDSEQ FROM UnitStatTab WHERE UCLAUSE is NOT NULL ORDER BY
TFLDSEQ

i = 1
While not end of resultset
{
// Get values from next row of resultset
UClause[i] = GetString [1]          // get UCLAUSE
UJType[i] = GetString [2]           // get JTYPE
USFldSeq[i] = GetInt [3]            // get SFldSeq
UFldseq[i] = i                      // reset sequence
i++
}
Usize = i--;
```

566

Select UCLAUSE, JTYPE, SFLDSEQ,TFLDSEQ FROM UnitStatTab WHERE UCLAUSE is NOT NULL ORDER BY
TFLDSEQ

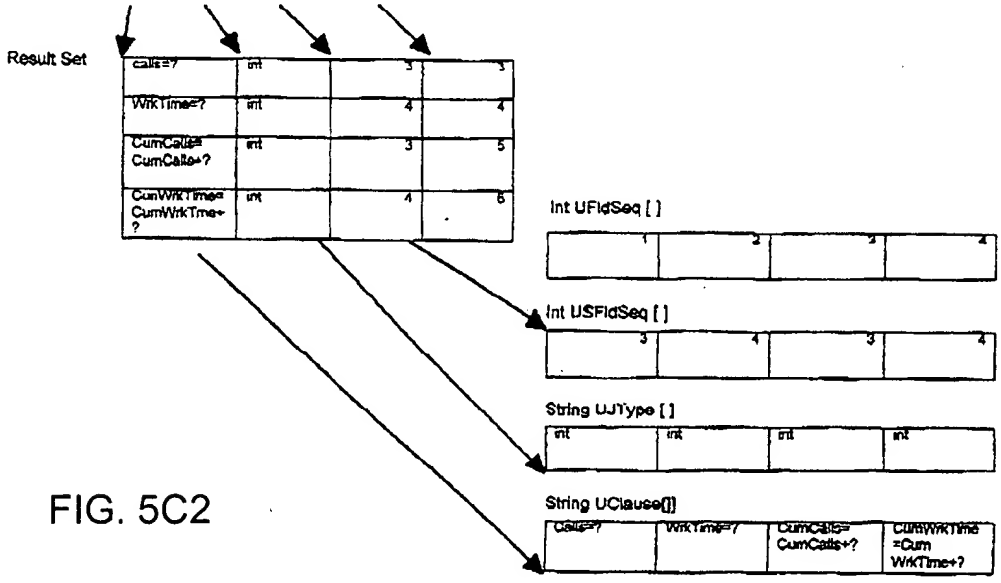

FIG. 5C2

PRINT OF DRAWINGS
AS ORIGINALLY FILED

574

SELECT WCLAUSE, SFLDSEQ, TFLDSEQ FROM UnitStatTab WHERE WCLAUSE is NOT NULL ORDER BY TFLDSEQ

```
I = 1
While not end of resultset
{
// Get values from next row of resultset
WClause[i] = GetString [1]        // get WCLAUSE
WJType[i] = GetString [2]         // get JType
WSFldSeq[i] = GetInt [3]          // get SFldSeq
WFldSeq[i] = Usize + i            // reset sequence
i++
}
Wsize=i-
```

575

FIG. 5C3

SELECT WCLAUSE, SFLDSEQ, TFLDSEQ FROM UnitStatTab WHERE WCLAUSE is NOT NULL ORDER BY TFLDSEQ

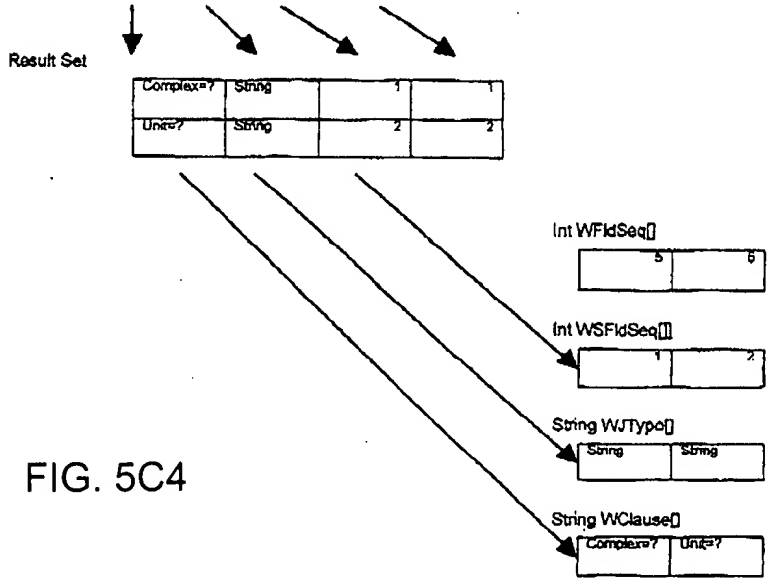

FIG. 5C4

PRINT OF DRAWINGS
AS ORIGINALLY FILED

580

Select ICLAUSE, JTYPE, SFLDSEQ, TFLDSEQ FROM UnitStatTab WHERE ICLAUSE is NOT NULL ORDER BY TFLDSEQ

```
i = 1
While not end of resultset
{
// Get values from next row of resultset
IClause[i] = GetString [1]          // get ICLAUSE
IJType[i] = GetString [2]           // get JTYPE
ISFldSeq[i] = GetInt [3]            // get SFldSeq
IFldSeq[i] = i                      // reset sequence
i++
}
Isize = i-;
```

581

FIG. 5D1

Select ICLAUSE, JTYPE, SFLDSEQ, TFLDSEQ FROM UnitStatTab WHERE ICLAUSE is NOT NULL ORDER BY TFLDSEQ

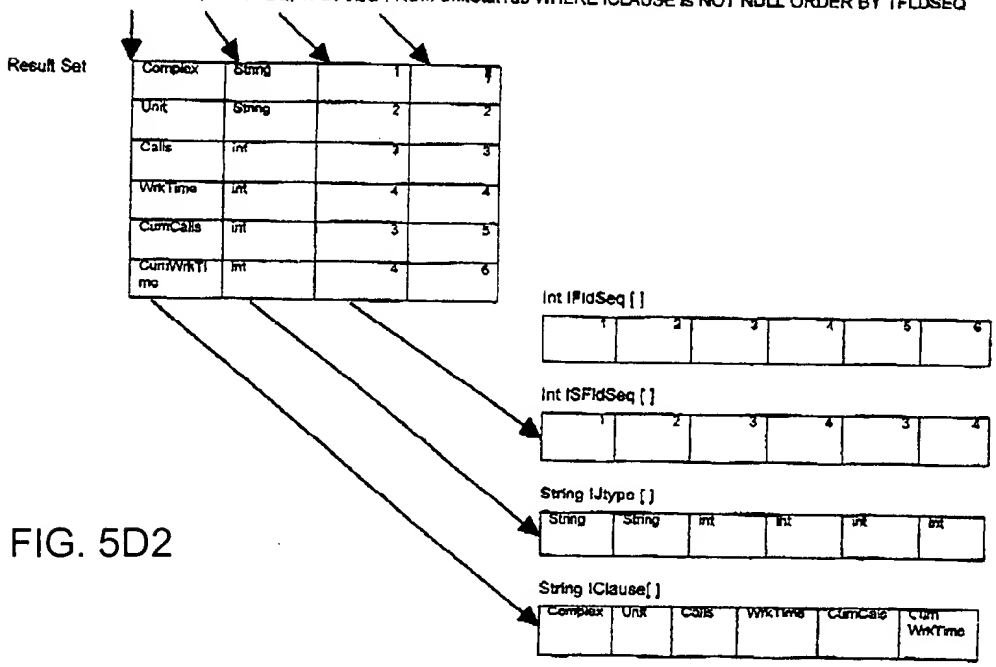

FIG. 5D2

PRINT OF DRAWINGS
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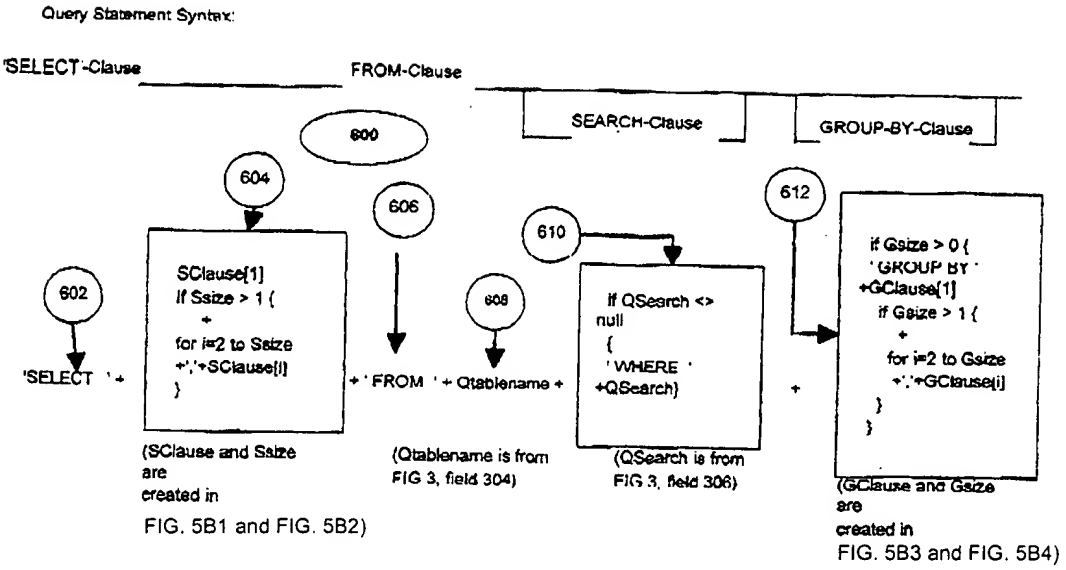

FIG. 6A1

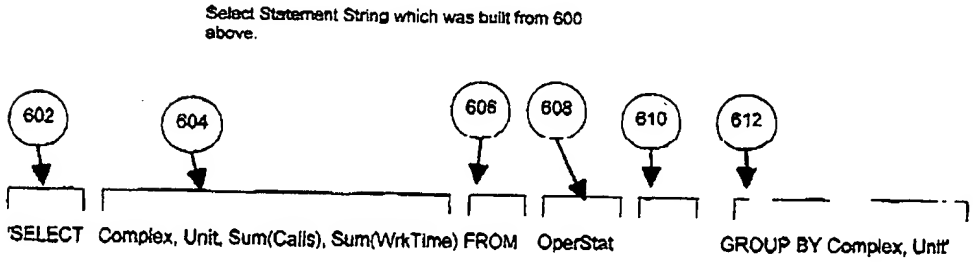

FIG. 6A2

PRINT OF DRAWINGS
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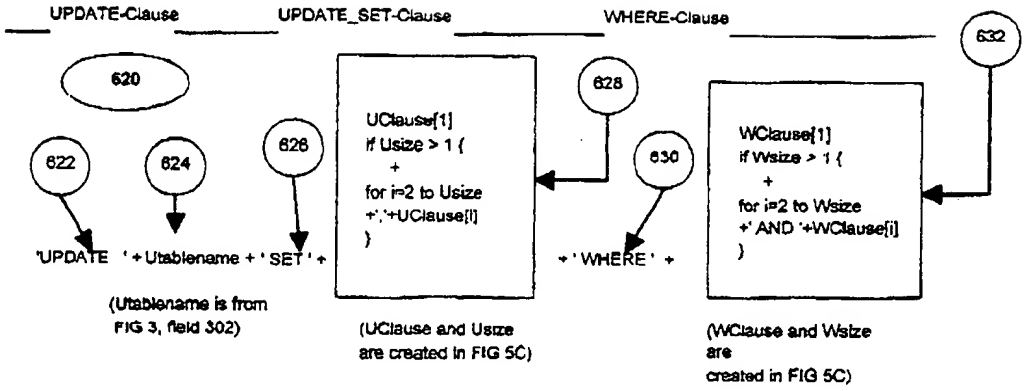


FIG. 6B1

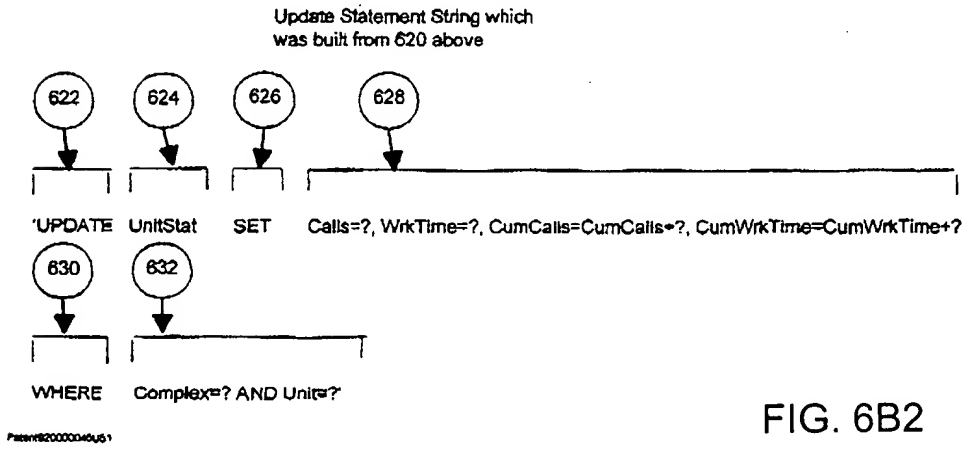


FIG. 6B2

PRINT OF DRAWINGS
AS ORIGINALLY FILED

Insert Statement Syntax:

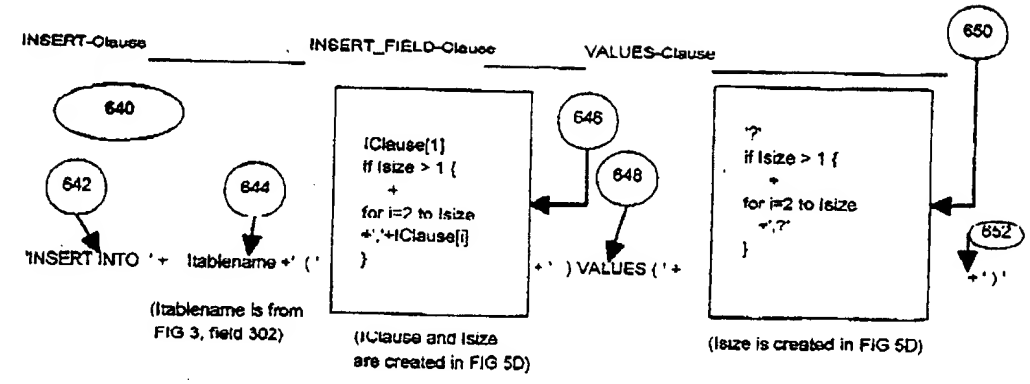


FIG. 6C1

Insert Statement String which was built from 640 above

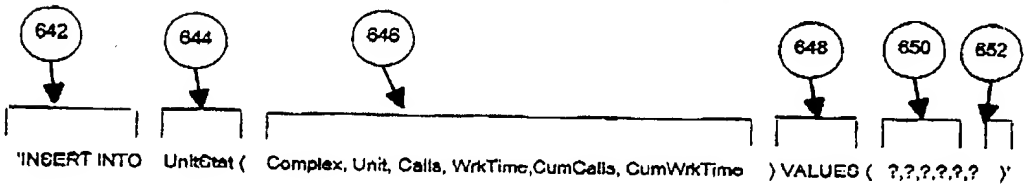


FIG. 6C2

PRINT OF DRAWINGS
AS ORIGINALLY FILED

'SELECT Complex, Unit, Sum(Calls), Sum(WrkTime) FROM OperStat GROUP BY Complex, Unit'

```
For i=1 to Ssize
{
 j = SFldSeq[i]
 If SJType[i] = 'String'
   StringRS[j] = GetString[i]
else
   IntRS[j] = GetInt[i]
}
```

Fig. 7A

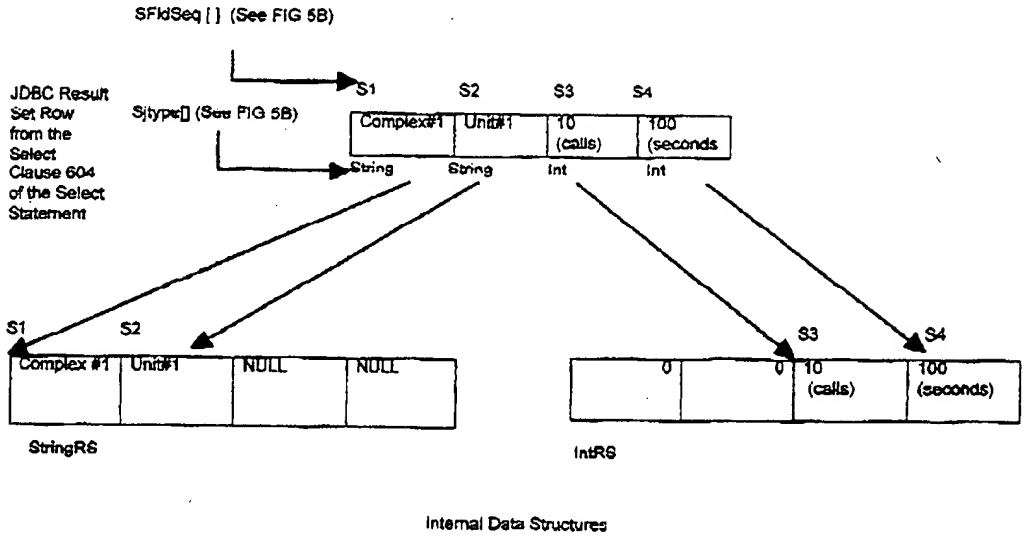


Fig. 7B

PRINT OF DRAWINGS
AS ORIGINALLY FILED

```
'UPDATE  UnitStat    SET     Calls=?, WrkTime=?, CumCalls=CumCalls+?, CumWrkTime=CumWrkTime+?
                               U1        U2                 U3                    U4

WHERE    Complex=? AND Unit=?'
                  U5          U6
```

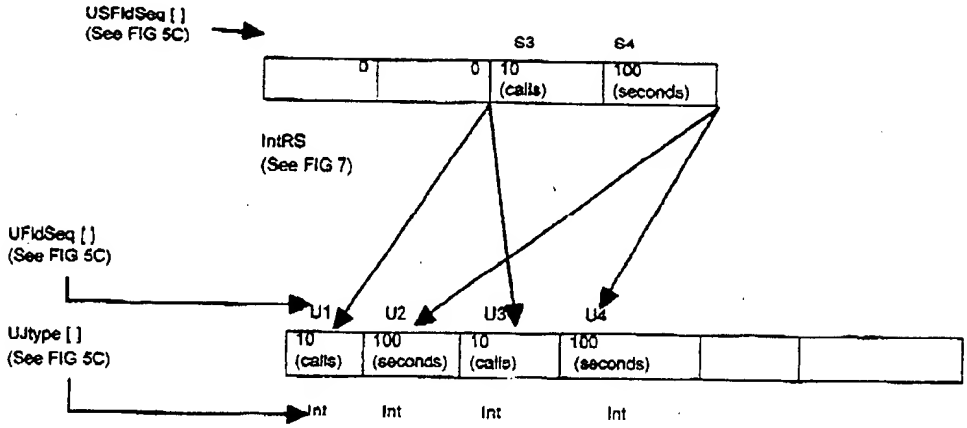
```
For i = 1 to Usize
   {
    j= UFldSeq[i]
    k=USFldSeq[i]
    if UJType[i] = 'String'
       setString[ j ] = StringRS[k]
    else
       setInt[j] = IntRS[k]
   }
```

FIG. 8A1

```
For i = 1 to Wsize
   {
    j=WFldSeq[i]
    k=WSFldSeq[i]
    if WJType[i] = 'String'
       setString [j ] = StringRS[k]
    else
       setInt [j] = IntRS [k]
   }
```

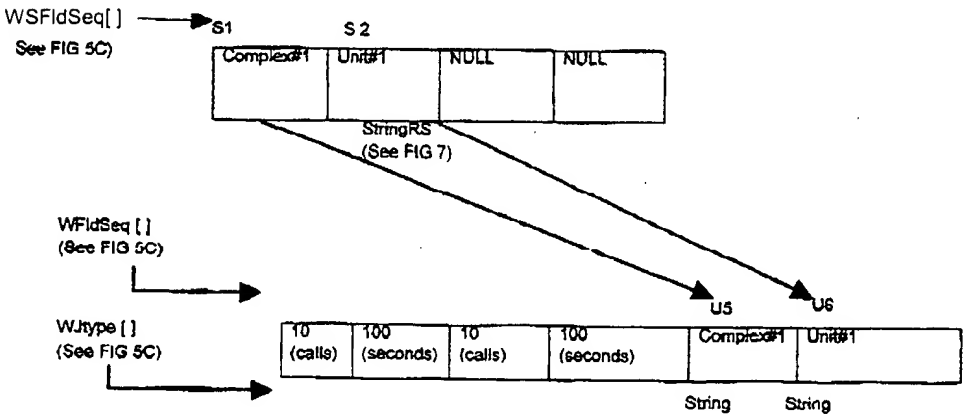
FIG. 8A2

PRINT OF DRAWINGS
AS ORIGINALLY FILED



JDBC parameters for Update_Set Clause 628 of Update Statement

FIG. 8A3



JDBC parameters for Where Clause 632 of Update Statement

FIG. 8A4

PRINT OF DRAWINGS
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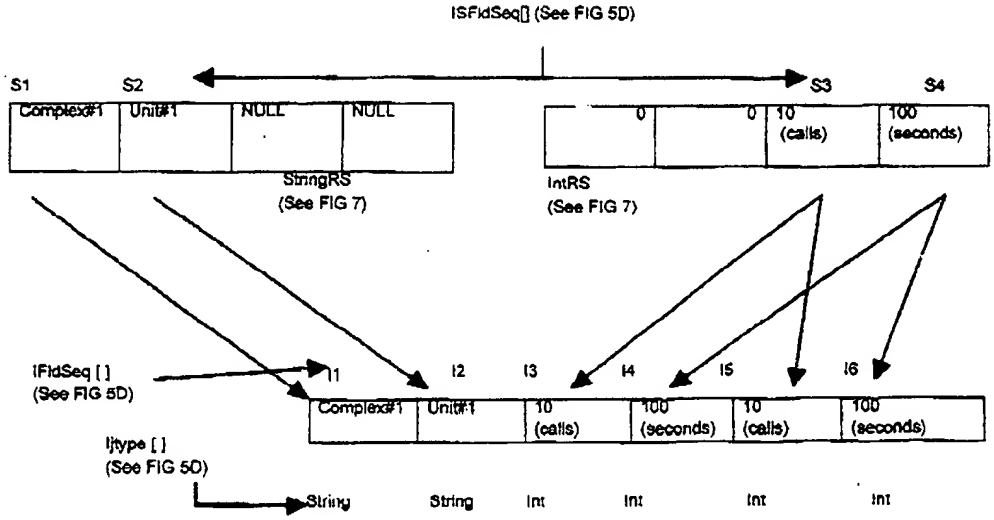
```
'INSERT INTO  UnitStat(  Complex, Unit, Calls, WrkTime,CumCalls, CumWrkTime ) VALUES (  ?,?,?,?,?,?  )'
                                                                                        I1,I2,I3,I4,I5,I6

For i = 1 to lsize
   {
    j=IFldSeq[i]
    k=ISFldSeq[i]
    if IJType[i] = 'String'
       setString[j] = StringRS[k]
    else
       setInt[j]  = IntRS[k]
   }
```

Fig. 9A



JDBC parameters for Values Clause 650 of Insert Statement

Fig. 9B